Results

Crash Reductions (Using 5 Year Before and After Periods)

Total Crashes:	58.3% Reduction	(From 24 crashes to 10 crashes)
Target Crashes*:	66.7% Reduction	(From 18 crashes to 6 crashes)
Target Injury Crashes:	81.8% Reduction	(From 11 crashes to 2 crashes)
Target PDO Crashes:	42.9% Reduction	(From 7 crashes to 4 crashes)
AADT:	1.2% Increase	(From 8300 vehicles to 8400 vehicles)

* Target Crashes include all Frontal Impact Crashes.
The Frontal Impact Crash types considered are as follows: Left Turn-Same Roadway; Left Turn-Different Roadways; Right Turn-Same Roadway; Right Turn-Different Roadways; Head On; and Angle.

The Treatment Location appears to have had a substantial decrease in both Total and Target Crashes from the before to the after period. The traffic signal installation appears to have been effective at reducing the pattern of Angle Crashes and the high severity injuries associated with this crash type. In addition, the left turn lane installation appears to have reduced the number of Rear End Crashes related to left turning vehicles on NC 704.

Location Photos Taken on February 9, 2006

For the complete project evaluation report and reports on other projects, please go to:
http://www.ncdot.org/doh/preconstruct/traffic/Safety/ses/projects/completed.html

North Carolina Department of Transportation
Traffic Engineering and Safety Systems Branch
Traffic Safety Systems Management Section
Safety Evaluation Group

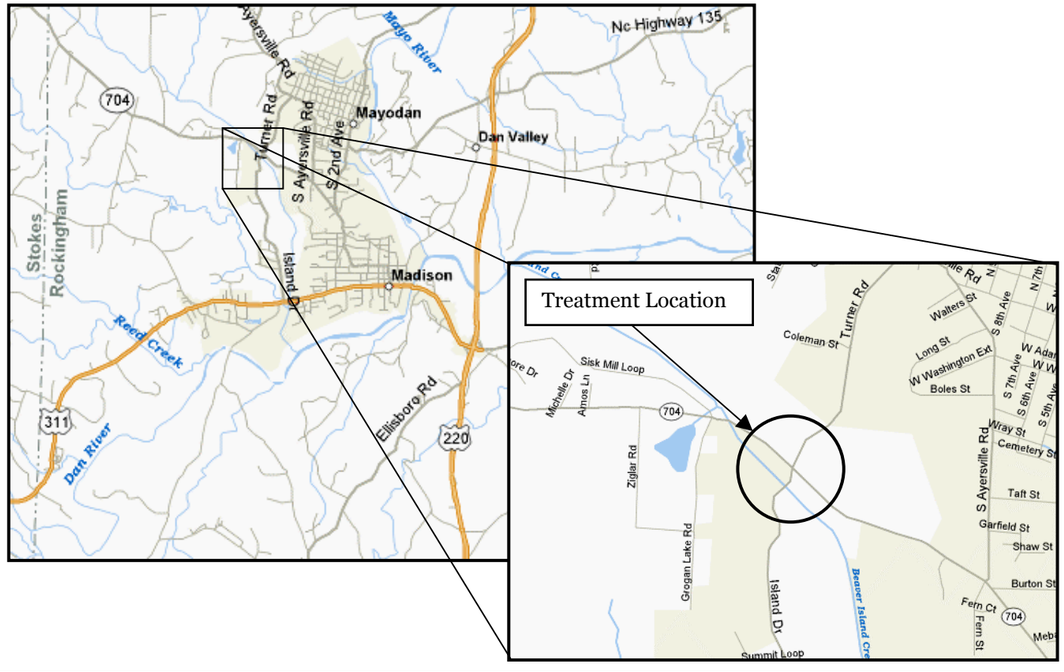
Evaluation of Spot Safety Project # 07-98-227

The Installation of a Traffic Signal and Left Turn Lanes at the Intersection of NC 704 and SR 1169 (Turner Rd / Island Dr) In Rockingham County

The subject intersection is located northwest of the town of Madison. A large manufacturing plant, UNIFI, is located near the intersection on SR 1169 (Island Dr). Prior to the signal installation, the intersection was controlled by a flashing traffic signal and stop signs located on SR 1169. Left turn lanes were also added to both approaches of NC 704 at the treatment intersection.

Traffic Engineering staff originally recognized this location as needing safety improvements because it had experienced 14 crashes in the three year time period between July 1, 1995 through June 30, 1998. One class-A injury, three class-B injuries, and eight class-C injuries resulted from these crashes. Insufficient gaps in traffic made it difficult for vehicles to safely cross the intersection from the side streets. In addition, left-turn traffic movements on NC 704 increased due to the UNIFI plant. The signal installation was intended to decrease the frequency of frontal impact crashes and reduce delay at the subject intersection. The left turn lanes were installed to decrease the potential for Rear End Crashes at the intersection.

The project was completed on August 7, 2000 at an estimated cost of $150,000.

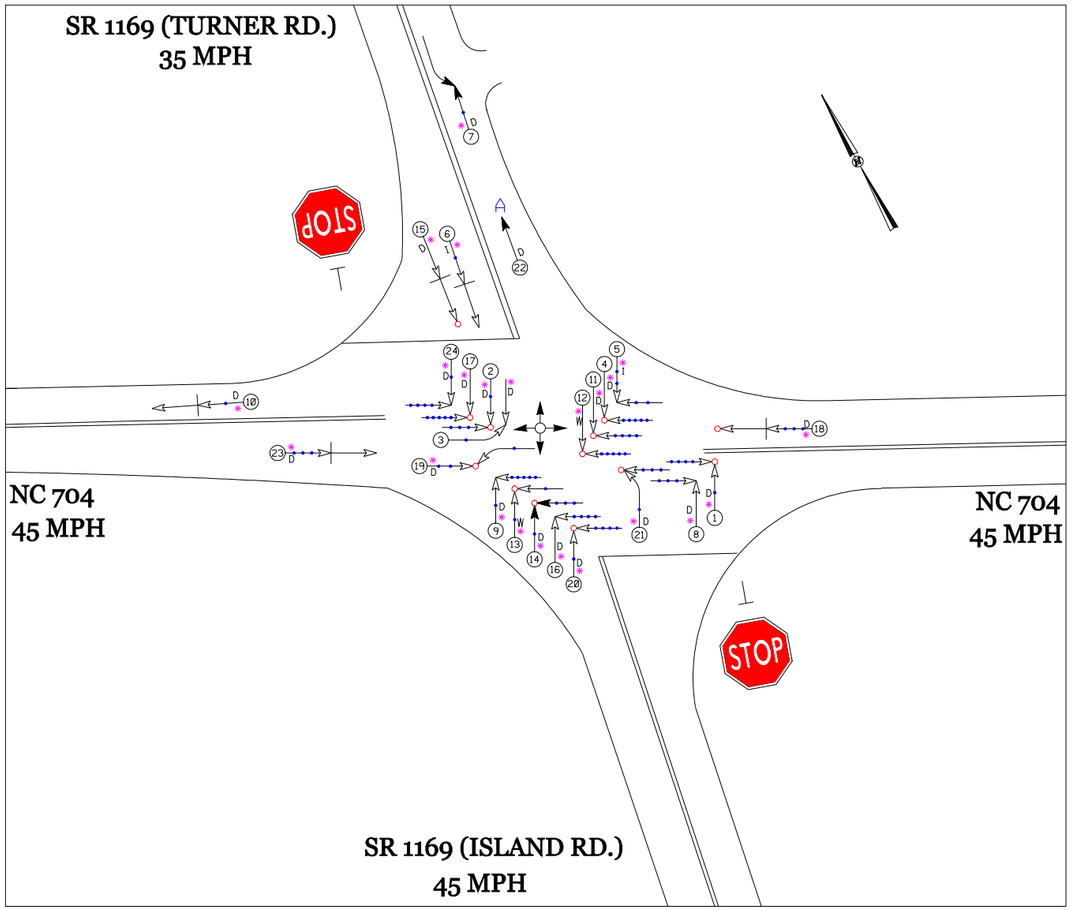


Before Period Collision Diagram

July 1, 1995 through June 30, 2000

(5 Years of Crash Data)

1997 ADT = 8300



- 24 Total Crashes
- 14 Angle Crashes
- 2 Left Turn-Different Roadway Crashes
- 2 Left Turn-Same Roadway Crashes
- 5 Rear End Crashes
- 1 Animal Crash

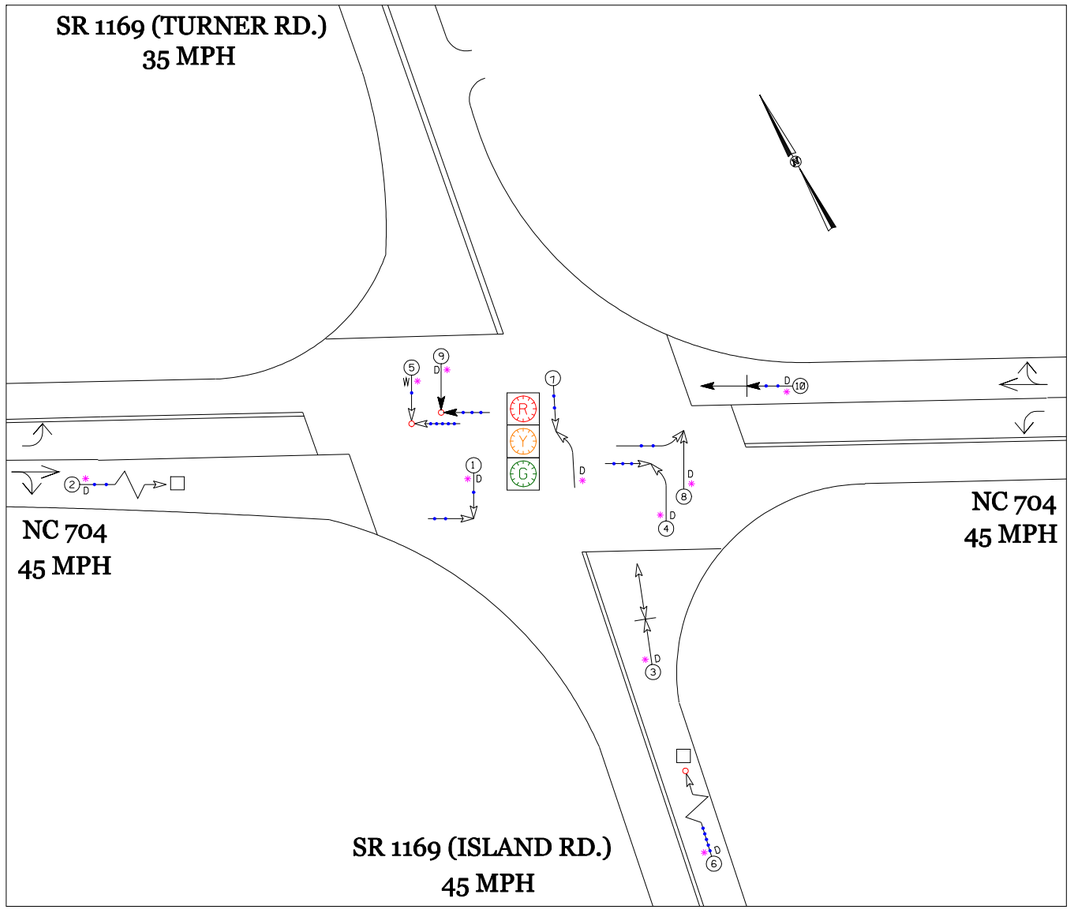
- 18 Target Crashes*
- 11 Target Injury Crashes
- 7 Target PDO Crashes

After Period Collision Diagram

October 1, 2000 through September 30, 2005

(5 Years of Crash Data)

2003 ADT = 8400



- 10 Total Crashes
- 3 Angle Crashes
- 2 Left Turn-Different Roadway Crashes
- 1 Left Turn-Same Roadway Crash
- 2 Run Off Road Crashes
- 1 Rear End Crash
- 1 Backing Up Crash

- 6 Target Crashes*
- 2 Target Injury Crashes
- 4 Target PDO Crashes

* Target Crashes are deemed correctable by the treatment.
For this evaluation, Target Crashes include all Frontal Impact Crashes such as:
Left Turn-Same Roadway; Left Turn-Different Roadways; Right Turn-Same Roadway;
Right Turn-Different Roadways; Head On; and Angle